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DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

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MINERALS PROGRAM
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Reply to: State of Utah
Division of Water Quality
Department of Environmental Quality
Salt Lake City, Utah 84114-4870

January 7, 1992

RECEIVED

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DIVISION OF
OIL GAS & MINING

Mr. Paul Spor, Manager
North Lily Mining Company
P.O. Box 421
Eureka, UT 84628

RE: Leaky Liners--Requirements of Ground
Water and Construction Permits and
Monitoring

Dear Mr. Spor:

We thank you for your submittals of September 24, 1991, October 10, 1991 and an undated letter written about October 25, which contain information about leaks in your process ponds, closure data for North Lily's heap leach facilities and monitoring information. We apologize for the delay in this letter, which was partly due to the considerable reviews required and office rearrangement. Our comments to these letters are as follows:

A. LEAKY LINERS

1. Since we are aware of leaks in the liners of your process ponds, which were built prior to issuance of ground water permits, the conditions of the construction permit issued April 13, 1988 should be modified to read, "0-5 gallons leakage per day, should only be recorded." We will consider leakage of less than 15 gpd as insignificant for immediate reporting purposes, since this is about the daily leakage rate. Volumes greater than 15 gpd should be reported by phone within 24 hours and in writing within 5 days as stated in the construction permit. As stated in the construction permit, volumes greater than 50 gpd will require reduction in application rates, etc.
2. We understand the 35 gpd leak in the liner of the barren pond, reported in your letter of approximately October 25, is repaired. Repair was complicated by another on-going operation. The main pad was allowed to completely drain to the process ponds so that the surface could be ripped to increase permeability. Only about 20 percent of the Phase I pad has been piled with ore and is being leached.

Dave Rupp, from the Division of Water Quality (DWQ), made an inspection of the site on October 30, 1991, and reported that the pregnant and barren ponds were full, because of the recent snow storms and drainage from the main pad as described above. You should coordinate with Dave Rupp regarding all proposed repair methods and the scheduled date for completion.

B. REQUIREMENTS OF GROUND WATER AND CONSTRUCTION PERMITS

1. We acknowledge your submittal and plans for neutralization and closure of the pads and revegetation of the area. However, total cyanide, Item 1-c of your letter (9-24-91), needs to be less than 0.2 mg/l, rather than 0.75 mg/l. EPA is setting a limit of 0.2 mg/l for drinking water. Concentrations for unrestricted closure above 0.2 mg/l will require assurances that water resources won't be affected and the heaps may be subject to RCRA regulations.
2.
 - a. Additional peripheral FML may need to be laid when heaps are regraded to meet recontouring requirements. The addition of ore by using steeper slopes on your present pads would possibly increase closure costs.
 - b. Page 3 states "During recontouring, heap material will be spread out to cover all earthworks." There is conflict here, in that all heap material must be underlain by FML. See item d below.
 - c. Page 7, last paragraph. The reclamation of tailings area does not appear to be completed as was required in 1988.
 - d. Page 12, first paragraph states operational 2:1 slopes will be regraded upwards to a 3:1 slope. If an upward method was used, spent ore would not be pushed beyond the FML. A decision needs to be made on how recontouring will be accomplished.
 - e. Diklor is a powerful oxidant requiring extra safety measures. Storage and use procedures should be added to the contingency plans.
3. Your grid sampling method using a 100 g aliquot is the method agreed to in the April 1988 construction permits. This method is now outdated and the DWQ is recommending an inexpensive procedure adopted by the State of Nevada. Nevada's Meteoric Water Mobility Procedure (MWMP) uses a 5 kg ore sample, rather than 0.1 kg sample that was agreed to. We would like to have North Lily adopt the MWMP and are enclosing a copy for your examination.

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4. We received your contingency plans and other items you mailed the Division detailing cleanup and emergency actions for other mines. We are requesting that North Lily further refine this information into a specific plan for your mine use after you review this material. All North Lily employees should be familiar with this information. A contingency plan is required by the ground water permit.

C. MONITORING

1. A longer post-closure ground water monitoring period, to fulfill the ground water permit requirements would be appropriate. An annual sample for ten years after closure would probably be satisfactory.
2. We received your daily inspection and monitoring report dated October 10, 1991. You are correct that the date for quarterly reporting of monitoring results should be October 15, 1991, not September 15, 1991. Please make the change in your copy of the permit.

We believe it would be helpful to all concerned if North Lily put together an Environmental Action manual describing procedures for employees during an emergency, and duties of employees during monitoring procedures. The manual would contain contingency plans (item B3 above) for spills, chemicals to be used, how to make and report monitoring inspections, procedures for well sample collections, and neutralization and closure actions. A sample manual from another mine was sent to North Lily as an example.

If you have any questions, call Mack Croft or Dave Rupp at 538-6146.

Sincerely,

Utah Water Quality Board



Don A. Ostler, P.E.
Executive Secretary

DAO:MGC:rp/mhf

Enclosure

cc: Roger Foisy
Division of Oil, Gas and Mining